

WHAT IS CLAIMED IS:

*CONFIDENTIAL*

1. A semiconductor manufacturing apparatus comprising:  
a light source; and  
a lighting device, said lighting device comprising  
(i) an electrical power source unit for supplying  
electricity to said light source, and  
(ii) a starter unit for lighting said light source,  
wherein said starter unit has a metal piece for connecting  
said lighting device to said light source.
2. A semiconductor manufacturing apparatus according  
to Claim 1, wherein said light source is a discharge lamp.
3. A semiconductor manufacturing apparatus according  
to Claim 1, wherein said metal piece is disposed at a side  
wherein high voltage is applied for lighting said light  
source.
4. A semiconductor manufacturing apparatus according  
to Claim 1, further comprising a mechanism for integrally  
driving said light source and said lighting device.
5. A semiconductor manufacturing apparatus according  
to Claim 1, further comprising means for changing the

positional relation between said light source and an optical element disposed near said light source.

6. A semiconductor manufacturing apparatus according to Claim 1, wherein said light source and said lighting device are disposed within a single housing.

7. A semiconductor manufacturing apparatus according to Claim 6, wherein said housing has outer walls provided with electromagnetic shielding and has a configuration of copper wire mesh sandwiched between thermal insulating material, said copper wire mesh being grounded.

8. A semiconductor manufacturing apparatus according to Claim 6, wherein the temperature of said light source and said lighting device is adjusted using air of the ambient atmosphere from outside said housing, taken into said housing from a single air intake and being subjected to temperature adjustment with a single temperature adjusting means.

9. A semiconductor manufacturing apparatus according to Claim 8, wherein said light source and said lighting device are subjected to temperature adjustment in the order of said lighting device first and then said light source,

using the taken in air.

10. A semiconductor manufacturing apparatus comprising:

a light source;

a lighting device for lighting said light source; and

a connector for connecting said light source and said lighting device with a metal piece.

11. A semiconductor manufacturing apparatus according to Claim 10, wherein said light source is a discharge lamp.

12. A semiconductor manufacturing apparatus according to Claim 10, wherein said light source and said lighting device are disposed within a single housing.

13. A semiconductor manufacturing apparatus according to Claim 12, wherein said housing has outer walls provided with electromagnetic shielding and has a configuration of copper wire mesh sandwiched between thermal insulating material, said copper wire mesh being grounded.

14. A semiconductor manufacturing apparatus according to Claim 10, wherein said metal piece is disposed at a side wherein high voltage is applied for lighting said light

source.

15. A semiconductor manufacturing apparatus according to Claim 10, further comprising a mechanism for integrally driving said light source and said lighting device.

16. A semiconductor manufacturing apparatus according to Claim 10, further comprising means for changing the positional relation between said light source and an optical element disposed near said light source.

17. A semiconductor manufacturing apparatus according to Claim 12, wherein the temperature of said light source and said lighting device is adjusted using air of the ambient atmosphere outside said housing, taken into said housing from a single air intake and being subjected to temperature adjustment with a single temperature adjusting means.

18. A semiconductor manufacturing apparatus according to Claim 17, wherein said light source and said lighting device are subjected to temperature adjustment in the order of said lighting device first and then said light source, using the taken in air.

19. A semiconductor manufacturing apparatus according to Claim 10, further comprising a computer having a display, a network interface, and networking software, wherein data communication of maintenance information regarding said semiconductor manufacturing apparatus can be performed via a computer network.

20. A semiconductor manufacturing apparatus according to Claim 19, wherein said networking software provides, on said display, a user interface for accessing a maintenance database which is provided by a vendor or user of said semiconductor manufacturing apparatus and which is connected to an external network outside of a plant wherein said semiconductor manufacturing apparatus is installed, thereby enabling information to be obtained from said database via said external network.

21. A semiconductor device manufacturing method comprising the following steps:

a step of installing, in a semiconductor manufacturing plant, a set of manufacturing apparatuses for performing various processes, including the semiconductor manufacturing apparatus according to Claim 10; and

a step of manufacturing semiconductor devices by a plurality of processes using the set of manufacturing

apparatuses.

22. A semiconductor device manufacturing method according to Claim 21, further comprising the following steps:

a step of connecting the set of manufacturing apparatuses by a Local Area Network; and

a step of performing data communication of information relating to at least one apparatus of the set of manufacturing apparatuses, between the Local Area Network and the external network outside of the semiconductor manufacturing plant.

23. A semiconductor device manufacturing method according to Claim 22, further comprising accessing a database, which is provided by a vendor or user of the semiconductor manufacturing apparatus, via the external network and obtaining maintenance information for the manufacturing apparatus by data communication, or performing data communication with a semiconductor manufacturing plant other than the semiconductor manufacturing plant, via the external network, so as to manage production.

24. A semiconductor manufacturing plant, comprising:  
a set of manufacturing apparatuses for performing

various processes, the set including the semiconductor manufacturing apparatus according to Claim 10;

a Local Area Network connecting said set of manufacturing apparatuses; and

a gateway enabling access to an external network outside of said plant from said Local Area Networks,

wherein data communication of information relating to at least one apparatus of said set of manufacturing apparatuses is performed.

25. A maintenance method for the semiconductor manufacturing apparatus according to Claim 10 installed in a semiconductor manufacturing plant, said method comprising the following steps:

a step of a vendor or user of the semiconductor manufacturing apparatus providing a maintenance database connected to an external network outside of the semiconductor manufacturing plant;

a step of permitting access to the maintenance database from within semiconductor manufacturing plant via the external network; and

a step of transmitting maintenance information accumulated in the maintenance database to the semiconductor manufacturing plant side via the external network.